SYLLABUS: FWIS 152
Nutritional Supplements: Real Remedies or Shady Science?

Spring 2016, T/Th 10:50 AM – 12:05 PM, GRW 160A

Instructor Contact Information

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Course Rationale and Description

This course examines the science behind some of the most highly promoted nutritional supplements for health and well-being. The supplement industry has recently grown to $33 billion per year, and more than half of Americans now take supplements regularly. Because nutritional supplements are not regulated like pharmaceuticals, consumers have begun to question the safety, purity, and efficacy of these products. Students will examine the challenges in regulating supplements, the role of supplements as alternative or complementary medicine, the biology of common but complex diseases such as cancer and depression, and the molecular mechanisms of supplements' effects on the human body. Through writing assignments and oral presentations, students will explore this rapidly growing but poorly regulated approach to improving health.

Course Objectives

By taking a FWIS course, students will

- Enhance their understanding of the central place of writing and communication in the learning process and in academic life
- Learn strategies for analyzing, synthesizing, and responding to college-level materials
- Improve their ability to communicate correctly and effectively in writing and in speech, taking into account audience and purpose
- Become comfortable with writing as a process and learn strategies—for instance, prewriting, outlining, and revision—for working through that process
- Learn appropriate use of the work of others and, where necessary, specific practices of citation
- Learn to articulate oral arguments and to respond productively to arguments of others in formal presentations and in class discussion.

By taking FWIS 152, students will additionally

- Understand the role of supplements as alternative or complementary medicine
- Describe the strengths and limitations of the supplement industry
- Analyze the evidence for the use of supplements to enhance physical appearance or improve cognitive functioning
- Understand the biology of cancer, clinical depression, and rheumatoid arthritis and how supplements may be useful to prevent or treat these diseases
- Learn how to locate and critically evaluate evidence for or against supplements promoted to be useful in improving health or treating disease
- Develop skills in evaluating sources of scientific information
- Understand the significance of non-biological factors in questions concerning the choice to use nutritional supplements
- Learn how to productively engage with interdisciplinary material in their research
- Learn how to communicate complex medical/scientific information to the lay public
- Practice sharing and responding to members of a peer community through blogging
- Learn or improve video editing/production skills

Required Course Materials

No textbook is required. All readings will be provided in OWL-Space.

Grading

Note: all page numbers refer to documents in 12 pt Times New Roman, double-spaced, with 1 inch margins

	Due Date	% Final Grade
Paper 1: Diagnostic Essay (1-1.5 pp.)	01.15	2.5
Paper 2: Ensuring safety, purity, and efficacy of supplements (2.5-4 pp.)		
Draft	02.02	5
Final	02.23	10
Paper 3: Evidence for or against vitamin D, Omega-3s, or EGCG for colon cancer, depression, or RA (2.5-4 pp.)	03.10	15
Paper 4: Research paper (5-7 pp.)		
Draft	03.24	10
Final	04.21	10
Presentation 1: Data in Support of a Supplement (4-5 min)	03.08	5
Presentation 2: Research Project (11-15 min)	04.12	15
Video project: TV commercial (50-90 sec)	04.19	7.5
Class Participation	--	20

Course Policies

Attendance and Participation

Class attendance is mandatory. Class discussions and group exercises will be major components of this course, so come to class and be prepared to express your thoughts, reading interpretations, and questions. Group feedback and interactive analysis are vital tools in the

development of writing and communication skills. If you must miss class, please notify an instructor by email or phone *as soon as you are aware of the need for an absence (i.e., beforehand)*.

Participation credit will be determined by attendance, quality contributions to in-class discussions and activities, participation in writing conferences or presentation practices outside of class, and participation in the class OWL-Space Blog (see expectations below).

OWL-Space Tool and Blog

The OWL-Space tool (http://owlspace.rice.edu/) will be used regularly in this class for posting of assignments and readings. Students will submit all papers, Presentation 2, and the TV Commercial to OWL-Space. Papers and feedback will normally be returned via OWL-Space.

The OWL-Space Blog tool will be used regularly. Students are encouraged to use the blog to share thoughts on class discussions, current events/news related to course topics, challenges in the class or related classes, communication tips/tricks, writing- or science-related questions, etc. Each week, students are expected to (a) post a new topic or respond to another student's post/comment, and (b) comment in response to the instructor's weekly prompt. Each Tuesday by 10:50 AM, the instructor will post a prompt or question in the Blog. Students should respond during the week (by Friday, 11:59 PM) by uploading a comment in response to that post. Some weeks, student comments may be hidden from all students' view until all students have commented.

Honor Code

Students are expected to abide by the Rice Honor System (http://honor.rice.edu/).

One of the purposes of FWIS is to help new students understand the Rice Honor Code and to teach the rules of paraphrasing and citing as practiced in the United States. As such, FWIS instructors take an educational approach to transgressions of these rules, responding to errors with an opportunity for revision. At the same time, repeated or egregious violations will be brought before the Honor Council.

For this class, all graded assignments are to be prepared individually *unless otherwise stated in the written assignment*. We encourage you to talk outside of class about concepts covered in class. You may also share notes taken in class. However, any time you are *actively writing* outside of class, you must work alone. *Do not* share your written work or collaborate on writing outside of class. Students must produce original work for this course; submitting work from other courses is not permitted.

Papers

Each student will complete four papers in this course. Paper 1 is a 1- to 1.5-page diagnostic essay to inform the instructor about the writing skills of each student and the class as a whole. Papers 2 and 3 are 2.5- to 4-page analyses based on in-class discussions and provided materials. Paper 4 is a 5- to 7-page research paper on an independent topic.

All papers are to be submitted via OWL-Space as a Microsoft Word file (contact the instructor if this requirement poses a problem for you). Papers should be written in 12 point Times, Times New Roman, or Cambria font, with double spacing, 1-inch margins, and page numbers. Students should put their name on the paper and in the filename.

Late papers will **not** be accepted unless arrangements are made prior to the due date.

Opportunities for Revision

To provide the greatest opportunity for practice in writing and responding to feedback, students will have the opportunity to revise written work. Two of the four papers will be submitted as draft and final versions. Additionally, if a student has difficulty with any written assignment and receives a grade **lower than 75** (a rare occurrence), the instructor will coordinate a writing conference with the student to discuss his/her paper and will permit the student to revise and resubmit the paper. The paper must be submitted within one week of the date the paper is returned in OWL-Space. The higher grade (original or revision) will be recorded, but will not exceed 75.

Presentations

Each student will give two presentations in this course. Presentation 1 will be a short (4-5 min) explanation of a figure or table from a paper reviewed for the student's research project; a slideshow is optional. Presentation 2 will be a longer (11-15 min) summary of the student's research paper; PowerPoint or Prezi is required.

Late presentations will **not** be accepted unless arrangements are made prior to the date scheduled for the presentation.

TV Commercial

Each student will create a short (50-90 sec) video to advertise a clinically proven supplement selected by the student. The commercial will explain the scientific/molecular actions of the supplement to a general audience.

The TV Commercial is due the last week of class (April 19); no late submissions will be accepted.

Field Trip

During class time, we will take a field trip to a local Vitamin Shoppe store to collect information about the availability and marketing of supplements and to interview the sales staff. Attendance on this day is mandatory; the field trip cannot be made up on another day. Please speak with the instructor beforehand if you will not be able to attend class on this day.

The Center for Written, Oral, and Visual Communication

The Center for Written, Oral, and Visual Communication is located on the south mezzanine of Fondren Library. The Center provides writing consultants who may help you at any stage of the planning, design, or writing process. To make an appointment, visit the Center or go to http://pwc.rice.edu/.

Students With Disabilities

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with course instructors during the first two weeks of class. All discussions will remain confidential. Students with disabilities should also contact Disability Support Services in the Allen Center.

Course Schedule (Subject to revision)

Week 1 ◆ 01/12/16 and 01/14/16 ✪ Paper 1 due 5 PM, 01/15/16

1. Introductions
2. Syllabus
3. Definition of a writing-intensive seminar and the importance of communication
4. Experiences and expectations
5. Assignment of Paper 1
6. The scientific process and evidence-based medicine
7. How to read a scientific paper
8. Writing strategies
9. Visit to CWOVC

Week 2 ◆ 01/19/16 and 01/21/16

1. Discuss Paper 1
2. Supplements vs. drugs; the FDA
3. How a drug gets to market
4. Evolution of the supplement industry; barriers to clinical trials
5. NY Times exposé: Are Herbal Supplements Not What They Seem?
6. Assignment of Paper 2: Ensuring Safety, Purity, and Efficacy of Supplements

Week 3 ◆ 01/26/16 and 01/28/16

1. Biology of colon cancer
2. Role of vitamin D
3. Sandro Galeo, MD, DrPH article: This is Why You Can't Always Trust Data

Week 4 ◆ 02/02/16 and 02/04/16 ✪ Paper 2 Draft due 10:50 AM, 02/02/16

1. Writer's Workshop
2. Biology of clinical depression
3. Role of Omega-3 fatty acids

Week 5 ◆ 02/09/16 and 02/11/16

1. Biology of rheumatoid arthritis
2. Role of green tea epigallocatechin-3-gallate (EGCG)
3. Assignment of Presentation 1: Data in Support of a Supplement
4. Improving sentences and paragraphs

Week 6 ◆ 02/16/16 and 02/18/16

1. Assignment of Paper 3: Evidence for or against vitamin D, Omega-3s, or EGCG for colon cancer, depression, or RA
2. How to give an effective oral presentation
3. Assessing the validity of sources
4. Citations, avoiding plagiarism, managing references
5. Zotero Workshop: Debra Kolah, Fondren Science Librarian

Week 7 ◆ 02/23/16 and 02/25/16 ✪ Paper 2 Final due 10:50 AM, 02/23/16

1. Assignment of Paper 4: Research Paper
2. Assignment of Presentation 2: Research Presentation

3. Vitamin Shoppe Field Trip
4. Discussion of the Sales and Marketing of Supplements
5. Software for managing references
6. Mid-term evaluation of course

Week 8 ◆ 03/01/16 and 03/03/16 **SPRING BREAK!**

Week 9 ◆ 03/08/16 and 03/10/16 ✪ Presentation 1 due in class, 03/08/16
✪ Paper 3 due 10:50 AM, 03/10/16

1. Presentation 1 given in class 03/08/16
2. Discussion of presentations and process of writing Paper 3
3. Discussion of mid-term course evaluations
4. View *War on Health: FDA's Cult of Tyranny* (meet in Rice Cinema)
5. Learning how to critically read and engage with a sociological research paper

Week 10 ◆ 03/15/16 and 03/17*/16*

1. Discussion of *War on Health*
2. Discussion of Paper 3
3. Discussion: non-biological factors of supplement consumption
4. Assignment of TV Commercial

Week 11 ◆ 03/22/16 and 03/24/16 ✪ Paper 4 Draft due 10:50 AM, 03/24/16

1. Writer's Workshop
2. The science of fitness products: Protein powder and creatine
3. How to make a commercial: A video tutorial at the Digital Media Center

Week 12 ◆ 03/29/16 (3/31/16 Midterm Recess, no class)

1. What sells a supplement? A review of advertisements

Week 13 ◆ 04/05/16 and 04/07/16

1. Class cancelled Tuesday; Required individual meetings to practice Presentation 2 with Dr. Purugganan (M or T) and the CWOVC consultants (W, Th, F, or S/S)
2. The science of supplements to improve cognitive functioning
3. Discussion of Paper 4

Week 14 ◆ 04/12/16 and 04/14/16 ✪ Presentation 2 due 9:50 AM, 04/12/16

1. Presentation 2 given in class 04/12/16
2. Discussion of oral presentations
3. DCA: Have we ignored the cure for cancer?
4. Learning how to critically read and engage with an anthropological paper

Week 15 ◆ 04/19/16 and 04/21/16 ✪ TV Commercial due 9:50 AM, 04/19/16
✪ Paper 4 Final due 11:59 PM, 04/21/16

1. TV Commercials shown in class
2. Emerging supplements
3. Discussion: anthropological concepts of the body
4. Final evaluation of course; class discussion